

## **REMARKS**

The issues outstanding in the Final Rejection of June 15, 2010, are the objection to the abstract and the rejections under 35 U.S.C. 103. Reconsideration of these issues, in view of the following discussion, is respectfully requested. At the outset, the Examiner is thanked for indicating withdrawal of the previous rejection under 35 U.S.C. 112.

### **Abstract**

The typographical error in the previous abstract is regretted. A new abstract is furnished herewith, and withdrawal of the objection is respectfully requested.

### **Rejections Under 35 U.S.C. 103**

Claims 1, 2, 4, 5, 8, 10, 12-14, 17-19, 21, 22, 24-26, 28, 29, 42 and 43 remain rejected under 35 U.S.C. 103 over Pause, now combined with Kilgour. Reconsideration of this rejection is respectfully requested.

It is noted that claim 24 is now included in this rejection. There are additional reasons for patentability of method claims 24-29, which are discussed first herein. As will be recalled, Pause discloses silicone rubber materials containing finely divided phase change materials, and a process for their production. See column 1, lines 18-21. Pause discloses a method for thermal insulation of cables or thermal protection of technical products employing this silicone rubber matrix containing the finely divided phase change materials, emulsified or dispersed in a cross-linked silicone rubber structure. See column 3, lines 16-28. This disclosure does not suggest the methods of claims 24-29.

At page 4 of the Final Rejection, it is again apparently argued that the preamble recitation of insulating a flowline or pipeline is not given patentable weight. It is again emphasized that the pipeline is not just a preamble recitation, as in the body of claim 24 there is further recitation that the insulating liquid base and gelling agent are positioned “on a surface of the flow line or pipeline to be insulated,” thus requiring the presence of the flowline or pipeline.

However, it is argued at page 5 of the office action that Pause disclosure of “thermal

insulation of cables or thermal protection against *technical products*" (emphasis added), at col. 3, lines 26-28, does not limit the scope of "technical products" and thus reads on protecting any products known to need thermal insulation coverage. It is respectfully submitted that this is far from how one of ordinary skill in the art would interpret "technical products." Indeed, if any "technical product" needing insulation were encompassed by this recitation in Pause, regardless of the entirety of the disclosure and what patentees actually teach, then the material could be used for insulating rocket engines, inside of winter coats, inside of double pane windows, electronic components, and any other uses despite varying widely diverse factors being imposed upon the thermal insulating material. Clearly, this is *not* only not patentees' intent, but not how the term would be taken by one of ordinary skill in the art. Instead, since "technical products" has no intrinsic meaning, one of ordinary skill would look to the specific class of products disclosed in the reference, and would see that the properties disclosed therein are "thermal performance" and "comfort sensation" (see the abstract) and "thermal performance characteristics and thermal comfort sensation" (see col. 1, lines 26-27). This "thermal comfort" is always associated with the thermal performance of items which are in human contact, i.e., car seats, bicycle saddles, diving suits, building materials or medical devices (see the abstract), sports garments, diving suits, protective garments, blinds, building materials, medical products, automotive products (col. 1, lines 29-31), building products, protective garments, medical devices, automotive products and sporting goods such as diving suits (col. 3, lines 27-30). In all of these products, the common thread is human perception of thermal comfort (even for building materials, as thermal insulation in buildings is an important factor in achieving thermal comfort for the occupants there within). Note also that, although Pause does disclose also "cable insulation," the patent makes a distinction between "cable insulation" and "thermal protection of technical products." This clearly shows that insulation and thermal protection do not address equivalent issues. Thermal protection of technical products thus would be taken by one of ordinary skill in the art to mean overheating of electric or electronic components such as batteries, etc. One of ordinary skill in the art would not, however, envision "technical products" to include pipelines or flowlines, since these utilities are wholly different than the thermal insulation of bicycle seats, or building materials, where human comfort rather than transmissive properties are of importance,

and different from insulation of electronic products or cables where the desire is to prevent humans from exposure to heat generated by operation of the device. Simply because a material is effective in these uses does not suggest to one of ordinary skill that the material can be used in the highly different environment of pipelines. Thus, it is submitted that claims 24-29, which recite thermal insulation of pipelines, are simply not suggested by the use of a material to insulate, e.g., bicycle seats.

With respect to the rejection of the listed claims (including claim 24) employing Pause taken with Kilgour, it is again respectfully submitted that Kilgour is directed to a nonanalogous art area. Kilgour discloses a silicone elastomer gel emulsion/composition usable in the cosmetic field (see column 1, lines 59-61 and column 7, lines 65 to column 8, line 10 and examples 9 (make-up) and 13-14 (anti-perspirant). The silicon elastomer of Kilgour is better dispersed in the organic liquid used in the emulsion or the composition (see column 1, lines 52-53). The organic liquid is defined in column 7, lines 15-24, as specifically suitable for a cosmetic emulsion/composition, and is used at ambient temperature. One of ordinary skill in the art would not have combined this disclosure in Kilgour directed to cosmetics to an insulating agent such as liquid silicon rubber as described in Pause, wherein it is necessary to reduce the risk of demixing between an insulating base and polysiloxane so as to obtain thermal insulation having improved insulating quality, and stability over time and a *wide temperature range*. Regardless of whether it is well known to use a compatibilizing agent to homogenize a mixture of components in a personal care composition, the entirely different constraints found in insulating cables or bicycle seats as in Pause (with, in the case of cables, an amount of composition which surely would satisfy the personal care requirements of a small village) is simply not common sense to one of ordinary skill in the art. In view of the lack of any indication in the widely different fields of Pause for the need of a compatibilizer, this combination of references simply is hindsight.

However, it is argued at page 5 of the office action that the properties of a chemical compound depend on the structure thereof, not on the intended use. Indeed, this is true as to the properties of the compound. However, that is not the issue here, where the rejection depends on whether one of ordinary skill in the art would take a material shown to provide an important function in cosmetic compositions, and decide to add that material to a composition employed in

insulation, when there is, first, no showing that the added material is needed for the reason it is employed in the secondary reference and, two, no expectation in the art that the property of the material in cosmetic range would be maintained in the wholly different environment of the primary reference. At page 5, the office action argues that, if this logic were true, a reference in the beverage art teaching that ethanol mixes with water for beverages would not be expanded to the use of ethanol to mix with water in a cosmetic composition. Indeed, such an expansion would not be obvious. The fact that a water/alcohol mixture may be pleasant to drink does not provide one of ordinary skill in the art with a reasonable expectation of success if a water-based cosmetic composition is diluted with alcohol, and then applied to the skin. Would the fact that the material mixes result in a composition which maintains pleasant drinkability? A cosmetic composition is not to be ingested. Could the composition be applied to the skin without irritation? We do not know. The point is, the fact that a combination may be advantageous in one environment, does not make that combination advantageous in all environments, particularly different environments. Thus, the use of a compatibilizer in cosmetic composition does not suggest to one of ordinary skill in the art that beneficial properties would be obtained by the use of that compatibilizer in an insulating composition.

In insulating compositions, stability of the gel is an important property of the insulator, and in the present claims is achieved by incorporating a compatibilizing agent which is of the same nature as the insulating liquid base and can be grafted onto the polysiloxanes during cross-linking. See, for example, page 12, line 25 – page 13, line 1 of the present specification: when the insulating liquid base essentially consists of a paraffin or a mixture of paraffins (for example a C<sub>14</sub> to C<sub>20</sub> paraffin cut), a compatibilizing agent is generally used to improve the stability of the gel and to avoid paraffin washout. Indeed, in the insulating realm, the amount of the various components in the formulation is of importance, as taught at page 12, lines 3-6 of the specification: the fact that the hydrosilane functions consumed by grafting the compatibilizing agent can no longer take part in cross-linking and node formation is taken into account. The formulation is adapted to provide sufficient hydrosilane functions to ensure grafting of the compatibilizing agent and cross-linking.

Thus, it is clear that one of ordinary skill in the art would not combine the compatibilizer

of the cosmetic composition of Kilgour with the insulating compositions of Pause, with any reasonable expectation of success in the environment of the primary reference. Withdrawal of this rejection is therefore respectfully requested.

Claims 6, 9, 15 and 16 remain rejected under 35 U.S.C. 103 over Pause, Kilgour and Salyer. Reconsideration of this rejection is also respectfully requested. The deficiencies of Pause and Kilgour are discussed above. Salyer, cited purely for its disclosure of various phase change materials, provides no remedy to this deficiency. In Salyer, patentees' process involves cross-linking of the matrix, then phase change material is subsequently added, and incorporated into the cross-linked matrix by immersing the matrix into a bath of melted phase change material. Not only does Salyer fail to disclose a process in which the phase change material is added in a polysiloxane resin during the cross-linking step, but Salyer fails to disclose the use of a compatibilizing agent in order to improve the stability of the insulating gel over the time.

Accordingly, withdrawal of this rejection is also respectfully requested.

Claim 22 remains rejected under 35 U.S.C. 103 over Pause, Kilgour and Hupfield. Reconsideration of this rejection is also respectfully requested.

Hupfield does nothing to remedy the deficiencies of Pause and Kilgour, discussed above. Hupfield is cited solely for its disclosure of anti-bacterial agents used in insulating materials. In fact, Hupfield does not relate to the field of flow lines or pipeline thermal insulation. Hupfield fails to describe a gel formed from an insulating liquid base which is a change material and at least one gelling agent comprising at least one polysiloxane resin, and Hupfield fails to describe that additives are soluble in the liquid base. Accordingly, this rejection should also be withdrawn.

Claims 22 and 23 remain rejected under 35 U.S.C. 103 over Pause, Kilgour and Craubner. Reconsideration of this rejection is also respectfully requested. Craubner also fails to remedy the deficiencies of Pause and Kilgour and indeed is cited only for its disclosure of biocides. Although Craubner discloses a method for thermally insulated a pipeline consisting in surrounding the pipeline with an insulated material, which material comprises a plurality of contiguous hollow structures whose interstices are filled with a polysiloxane elastomer (line 35-39 page 2), Craubner fails to describe an isolated gel comprising an insulating liquid base which

is a phase change material, a gelling agent comprising at least one polysiloxane resin and a compatibilizing agent. Furthermore, Craubner fails to describe that additives are soluble in the liquid base. As a result, Craubner fails to remedy the deficiencies of the primary and secondary references, and withdrawal of this rejection is also respectfully requested.

Claims 24-29 remain rejected under 35 U.S.C. 103 over Pause taken with Vergouw. Reconsideration of this rejection is also respectfully requested. As noted above, Pause, even in combination with Kilgour (not used in the present rejection) fails to disclose the use of a compatibilizing agent in combination with a insulating composition such as that of the claims. Vergouw does not describe an insulating liquid base which is a phase change material, gelling agent with at least one polysiloxane resin and a compatibilizing agent, but instead discloses a gel based on kerosene having increased viscosity when stirred. As a result, regardless of its teaching of the installation of power cables, this reference even in combination fails to suggest insulation of a pipeline with a combination of ingredients as claimed. Indeed, insulation of power cables may include electric and thermal insulation, and must be achieved by using both protection by a pipeline (for safety) and thermal insulation by the insulation composition. Withdrawal of this rejection is accordingly respectfully requested.

The claims of the application are submitted to be in condition for allowance. However, should the Examiner have any questions or comments, she is cordially invited to telephone the undersigned at the number below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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